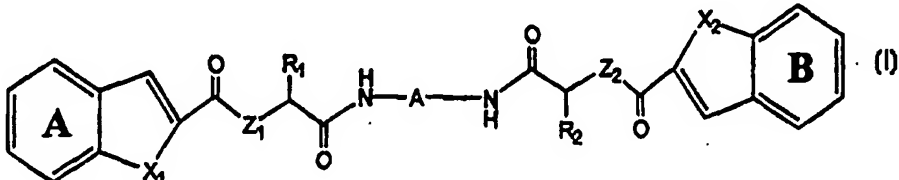
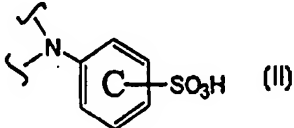
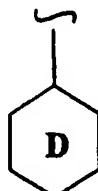







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<p>(21) International Application Number: PCT/US99/06792</p> <p>(22) International Filing Date: 29 March 1999 (29.03.99)</p> <p>(30) Priority Data: 09/052,494 30 March 1998 (30.03.98) US</p> <p>(71) Applicants: REPLIGEN CORPORATION [US/US]; 117 Fourth Avenue, Needham, MA 02194 (US). CAMBRIDGE NEUROSCIENCE, INC. [US/US]; One Kendall Square, Building 700, Cambridge, MA 02139 (US).</p> <p>(72) Inventors: HERLIHY, Walter, C.; 11 Brookhead Avenue, Beverly, MA 01915 (US). RUSCHE, James, R.; 18 Brigham Road, Framingham, MA 01701 (US). MARCHIONNI, Mark, A.; 24 Twin Circle Drive, Arlington, MA 02474 (US).</p> <p>(74) Agents: CARROLL, Alice, O. et al.; Hamilton, Brook, Smith & Reynolds, P.C., Two Militia Drive, Lexington, MA 02421 (US).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>
<p>(54) Title: PROTEIN-CARBOHYDRATE BINDING ANTAGONISTS</p> <div style="text-align: center;">  <p>(I)</p> </div> <div style="text-align: center;">  <p>(II)</p> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>(a)</p> </div> <div style="text-align: center;">  <p>(b)</p> </div> <div style="text-align: center;">  <p>(c)</p> </div> <div style="text-align: center;">  <p>(d)</p> </div> </div> <p>(57) Abstract</p> <p>Disclosed are novel compounds represented by structural formula (I); and physiologically acceptable salts thereof. X₁ and X₂ are independently -NH-, -O-, -S- or -C=C-. Z₁ and Z₂ are independently -O- or formula (II). A is a linking group. R₁ and R₂ are independently represented by a structure selected from (a), (b), (c) or (d). Rings A through F are independently substituted or unsubstituted. Also disclosed is a method of inhibiting binding of glycosaminoglycan with proteins whose activity is modulated by the glycosaminoglycans in a subject in need of such treatment. The method comprises administering to the subject an effective amount of at least one compound represented by (a), (b), (c) or (d).</p>		